PEC UPDATE

VOLUME 95-10 **17 JULY 1995**

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ISSUE HIGHLIGHTS

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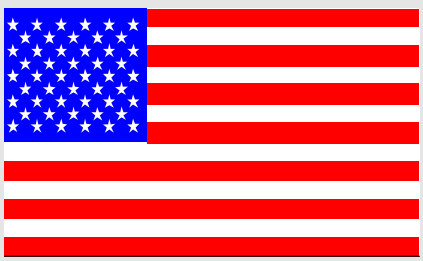


Recommended Immunization Schedule - An Update

The American Academy of Family Physicians has updated the January 1995 childhood immunization schedule, and their recommendations are listed below. For the complete immunization schedule, see the PEC Update 95-06 (17 March 1995).

Varicella Immunization

- Routine immunization with varicella vaccine is recommended for children between 12 and 18 months of age, preferably at the same visit that the measles, mumps, rubella (MMR) vaccine is administered.
- Children between 18 months and 12 years of age should receive varicella vaccine if they do not have a history of varicella and were not previously immunized.
- The dose for varicella vaccine for children aged 12 months through 12 years is 0.5 mL subcutaneously in the lateral upper arm or anterolateral thigh.
- Persons 13 years of age or greater should receive two 0.5-mL doses 4 to 8 weeks apart, if immunization is warranted.

Hepatitis B Immunization

- Hepatitis B immunization is recommended at age 11 or 12 years for children who did not receive hepatitis B vaccine (HBV) as infants.

Immunization Checks

- Pre-adolescent immunization status check is recommend at age 11 to 12 years to bring any missing immunizations, including MMR and HBV, up-to-date.
- Adult immunization status check is recommended at age 50 years to review immunization status, including tetanus/diphtheria for which a booster is recommended every 10 years.

Reference: Anonymous. AAFP updates childhood immunization schedule. Am Fam Physician 1995;51:2031.

From the Mailbag

PEC Q & A.....

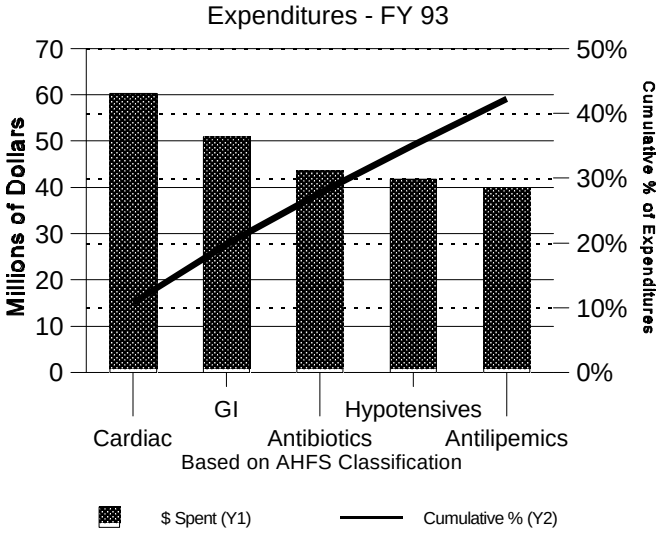
Q: How does the PEC determine what disease states to evaluate?

A: The PEC determined that 70% of pharmaceutical expenditures in the Department of Defense (DOD) direct care system were for drugs used primarily in outpatient, ambulatory disease states. To identify these disease states, specific data linking drug usage with outpatient diagnoses would have been ideal; however, these data were not available, thus drug purchase data for fiscal year (FY) 1993 were used as a surrogate measure.

These data were assigned therapeutic category codes based on the American Hospital Formulary Service (AHFS) classification. The data were sorted by dollar volume expenditures to provide a listing of these categories. The PEC then extrapolated the ambulatory disease states most likely to be treated by drugs in these categories.

The shaded bars in the Figure depict the DOD dollar volume expenditures for pharmaceuticals by AHFS classification for FY 1993. The line represents cumulative expenditures by drug class.

Figure. DOD Ambulatory Care Pharmaceutical Expenditures - FY 93



1996 PEC Ambulatory Care Pharmacist Conference

The PEC staff is in the midst of organizing the 1996 Ambulatory Care Pharmacist Conference. This conference will be held January 8-12, 1996 at the Hilton Palacio del Rio on the Riverwalk here in San Antonio, Texas. Mark your calendars now! The conference is practice-oriented, and details will be forthcoming as we finalize the agenda. Don't miss this great opportunity to network with other ambulatory care pharmacists. Please contact LCDR Mary Weber at the PEC for additional information on the conference.

Recall of Chemotherapy Book

The PEC recently received information that the Cetus Oncology/Chiron Therapeutics 1992 revised edition of "Cancer Therapy Protocols - Drug Administration Regimens", also known as the "Little Red Protocol Book", contains several errors which may be clinically significant. The company requests that health care professionals immediately discard this book to avoid any potential errors.

This action stems from two reports received via the US Pharmacopeial Reporting Program regarding this book. Both errors involve cisplatin therapy and are associated with serious safety concerns for patients. The company has concluded that additional errors, which may be clinically significant, are found in the book.

Several errors were also published in the 1989 edition titled "Cancer Chemotherapy Protocols - Drug Administration Regimens" (also known as the "Cetus Blue Protocol Book"). This book should also be discarded immediately.

Any questions regarding these books should be directed to R.D. Lauper, Pharm.D., Director, Professional Services, Chiron Therapeutics, at (510) 655-8703.

Tips to Improve Patient Medication Compliance

Patient noncompliance with medications is a major problem that is estimated to cost the health care system billions of dollars.[1,2] It has been estimated that as many as 50% of prescription medications are used incorrectly by patients,[1-3] and 14% to 21% of patients never fill their original prescription.[1] Noncompliance with medications accounts for up to 10% of hospital admissions and 23% of nursing home admissions.[2,3] Because of the significant problems associated with noncompliance, several tips are offered to help providers improve their patients' compliance with medications.

- *Improve physician-patient communication.* Patients who are satisfied with their physicians are more likely to comply with physician advice. Patients should be provided information about their disease, medications prescribed, the goals of care, and the importance of adhering to prescribed treatment and follow-up appointments. This communication promotes trust and a strong physician-patient relationship.[1,2]
- *Improve pharmacist-patient communication.* Pharmacists can reinforce physician instructions and provide additional information about the medication. Pharmacists should ensure the patient has a clear understanding of the reason the medication was prescribed, how to take the medication, and how to recognize and manage common adverse effects. Special precautions of the medication, such as 'take with food' or 'avoid alcohol,' should also be discussed with the patient. Easy to read, written instruction sheets can reinforce physician instructions and pharmacist counseling.[1-3]
- *Simplify dosing schedules.* Complex medication regimens have a detrimental effect on patient compliance. Medication regimens that are tailored to the patient's usual daily schedule and lifestyle, once-daily dosing regimens, longer-acting medication, shorter duration of therapy, more convenient administration routes, and special drug packaging can help improve patient compliance.[1,2]
- *Involve the patient in their care.* Patients who take an active role in their self-care will have increased compliance.[2]

These suggestions address just a few of the many factors affecting patient compliance. How has your military treatment facility (MTF) addressed patient compliance? If you have developed any innovative programs or have ideas for other methods to enhance patient compliance, the PEC is interested in your ideas and comments.

References:
1. Feldman JA, DeTullio PA. Hosp Formul 1994;29:204-11.
2. Anonymous. Formulary 1995;30:319-20.
3. Smith DL. Med Interface 1993;6(4):74-84.

Guidelines for the Use of Colony-Stimulating Factors

Colony-stimulating factors (CSFs) promote the growth and differentiation of particular hematopoietic precursor cells in patients with compromised hematopoietic function. These effects have led to the use of these agents for many diverse indications. However, the cost of these agents has led to concern about their appropriate use.[1,2] Two CSF products are currently approved by the Food and Drug Administration (Table).

The University Hospital Consortium (UHC), a not-for-profit, nationwide alliance of academic health centers, recently published an observational study of 535 patients to assess the appropriateness of CSF use based on UHC-developed indication guidelines.[1] Based on indication criteria, 71% of CSF use was appropriate, 7% was inappropriate, and 22% was unproven, but deemed promising by the UHC expert panel. Based on dosage evaluation criteria, 51% of the CSF usage was appropriate, 27% was inappropriate, and 22% was for unproven or promising indications. Of the total estimated drug cost for CSFs, 51% was spent on appropriate indications and doses, 20% on inappropriate doses

for appropriate indications, 16% on promising indications, and 13% on unproven or inappropriate indications. Efforts to minimize inappropriate or unproven uses of CSFs could lead to significant cost savings.

To address some of these issues, the American Society of Clinical Oncology developed clinical practice guidelines to improve the cost-effective use of CSFs in the area of oncology/hematology.[3] These guidelines are listed below for your information. Please refer to the full guidelines for additional information.

Guidelines for Primary CSF Administration (with the first cycle of chemotherapy)

- use if the incidence of febrile neutropenia is greater than or equal to 40%
- routine use not needed for previously untreated patients receiving most chemotherapy regimens
- use may be warranted in patients at higher risk for chemotherapy-induced infections even though data supporting this are not conclusive. Risk factors may include pre-existing neutropenia, history of recurrent neutropenia while receiving earlier chemotherapy of similar or lesser dose-intensity, or active infection.

Guidelines for Secondary CSF Administration (with subsequent cycles of chemotherapy if febrile neutropenia has previously occurred)

- use if febrile neutropenia was documented in an earlier cycle
- use if prolonged neutropenia (even without fever) causes excessive dose reduction or delay in therapy

Guidelines for CSF Therapy

- Afebrile neutropenic patients - not recommended
- Febrile patients
  - available data do not clearly support routine use as adjuncts to antibiotics
  - use may be reasonable in patients with prognostic factors predictive of clinical deterioration, such as pneumonia, hypotension, multi-organ dysfunction, or fungal infection, but benefits have not been definitively proven
- Little justification to use to increase chemotherapy dose-intensity
- Adjuncts to progenitor-cell transplantation
  - use to shorten period of neutropenia in patients undergoing high-dose cytotoxic therapy with autologous bone marrow transplantation
  - use after high-dose chemotherapy and peripheral-blood progenitor-cell (PBPC) transplantation
  - use to hasten recovery of patients experiencing delayed or inadequate neutrophil engraftment after progenitor-cell transplantation
  - effective in mobilizing PBPC for transplantation
- Myeloid malignancies
  - Acute myeloid leukemia - benefits not completely determined; use before and/or concurrently with chemotherapy is not recommended
  - Myelodysplastic syndromes - intermittent administration may be useful in patients with severe neutropenia and recurrent infection
- Avoid in patients receiving concomitant chemotherapy and radiation therapy
- Guidelines recommended for adults are generally applicable to pediatrics, but the optimal doses have not been determined
- Start therapy between 24 and 72 hours following chemotherapy; continue until absolute neutrophil count 10,000/μL after neutrophil nadir; shorter duration of administration sufficient to achieve clinically adequate neutrophil recovery is a reasonable alternative.

References:

1. Yim JM, et al. Ann Pharmacother 1995;29:475-81.
2. Longo DL. Clin Oncology Alert 1995;10(Suppl):1-4.
3. American Society of Clinical Oncology Ad Hoc Colony-Stimulating Factor Guideline Expert Panel. J Clin Oncol 1994;12:2471-508.

Table. Currently Available Colony-Stimulating Factors

CSF	Generic Name - Trade Name (Company)	Dose	Availability, FSS Price
G-CSF	Filgrastim - Neupogen® (Amgen)	5 μg/kg/day	300 μg/m, 1 mL - $985.63/10 vials 300 μg/mL, 1.6 mL - $1569.84/10 vials
GM-CSF	Sargramostim - Leukine® (Immunex)	250 μg/m^2/day	250 μg/mL, 1 mL - $60.14/vial 500 μg/mL, 1 mL - $115.23/vial